



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,792	02/14/2001	Keiji Sakata	36856.449	9594

7590

04/25/2002

Keating & Bennett LLP
Suite 312
10400 Eaton Place
Fairfax, VA 22030

EXAMINER

NGUYEN, TUYEN T

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 04/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,792

Applicant(s)

Sakata

Examiner

Tuyen Nguyen

Art Unit

2832



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Feb 14, 2001 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Art Unit: 2832

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 10-14 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, there is no antecedent basis for "the magnetic layer." In line 10, the term "about" is a relative term. The term "about" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claims 2-9 inherit the defects of the parent claim.

Art Unit: 2832

Regarding claim 2, applicant should clarify which magnetic layer is intended by “the magnetic layer.”

Regarding claim 3, there is no antecedent basis for “the ends of the multilayer inductor.”

Regarding claims 5, 6 and 8-9, the term “substantially” is a relative term.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

6. Claims 1-4, 7 and 9, as best understood in view of the rejections under 112 second paragraph, are rejected under 35 U.S.C. 102(e) as being anticipated by Meadors et al. [US 6,249,205].

Meadors et al. discloses a multilayer inductor [20] comprising:

- a plurality of stacked magnetic layers [32a-32d];
- through-holes [see figure 2] formed in the stacked magnetic layers;
- a plurality of coil conductor patterns [36, 38, 52 and 56];
- non-magnetic element [70] disposed in the vicinity of the coil conductor patterns in at least one of the magnetic layers;
- external electrodes [24, 26] being provided at end surfaces of the multilayer inductor; and
- lead-out portions [40, 57] which are connected to the external electrodes;

Art Unit: 2832

wherein the area of a projected plane of a circuit of each coil conductor patterns on a main surface of the magnetic layers is in a range of *from about 35% to about 75%* of the area of the main surface of the magnetic layer.

Regarding claim 7, Meadors et al. discloses at least one air gap [62] disposed inside one of the plurality of coil conductor patterns.

Regarding claim 9, Meadors et al. discloses selected one of the plurality of coil conductor patterns having a *substantially* J-shaped configurations [see figure 2].

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5, as best understood in view of the rejections under 112 second paragraph, is rejected under 35 U.S.C. 103(a) as being unpatentable over Meadors et al. in view of Folker et al. [US 5,777,539]

Meadors et al. discloses the instant claimed invention except for the magnetic layers being *substantially* disk-shaped.

Folker et al. discloses a multilayer inductor including a plurality coil conductor patterns disposed on a plurality of *substantially* disk-shaped layers [see figures 1 and 2].

Art Unit: 2832

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the *substantially* disk-shaped design of Folker et al. in Meadors et al. for the purpose of reducing size.

9. Claims 6 and 8, as best understood in view of the rejections under 112 second paragraph, are rejected under 35 U.S.C. 103(a) as being unpatentable over Meadors et al. in view of Gu et al. [US 5,499,005].

Meadors et al. discloses the instant claimed invention except for the specific shape of the coil conductor patterns.

Gu et al. discloses the use of C-shape or ring-shape coil conductor patterns [see figures 1 and 2] in a multi-layer inductor.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the shape design of Gu et al. for the coil conductor patterns of Meadors et al. for the purpose of facilitating manufacturing and optimizing the inductance [see column 3, lines 49-55].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuyen T. Nguyen whose telephone number is (703) 308-0821.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Elvin Enad, can be reached at (703)308-7619. The fax number for this Group is (703)308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)308-0956.

Application/Control Number: 09/782,792

Page 6

Art Unit: 2832

TTN

TTN

Art Unit 2832

April 22, 2002

Tracy T. Nguyen